30778

NATIONAL LIBRARY
OTTAWA

CANADA

BIBLIOTHÈQUE NATIONALE
OTTAWA

NAME OF AUTHOR....Gary Harold Naylor.....

TITLE OF THESIS...An Analysis of Determinants Relating To Football Coaching Effectiveness.....

UNIVERSITY.....Alberta.....

DEGREE FOR WHICH THESIS WAS PRESENTED.....M.A.....

YEAR THIS DEGREE GRANTED.....1976.....

Permission is hereby granted to THE NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

(Signed)..Gary H. Naylor.

PERMANENT ADDRESS:

..712 Pasadena Avenue
..Winnipeg, Manitoba
.....

DATED..August 12....1976

NL-91 (10-68)

INFORMATION TO USERS

THIS DISSERTATION HAS BEEN
MICROFILMED EXACTLY AS RECEIVED

This copy was produced from a microfiche copy of the original document. The quality of the copy is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

Canadian Theses Division
Cataloguing Branch
National Library of Canada
Ottawa, Canada K1A ON4

AVIS AUX USAGERS

LA THESE A ETE MICROFILMEE
TELLE QUE NOUS L'AVONS RECUE

Cette copie a été faite à partir d'une microfiche du document original. La qualité de la copie dépend grandement de la qualité de la thèse soumise pour le microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

NOTA BENE: La qualité d'impression de certaines pages peut laisser à désirer. Microfilmee telle que nous l'avons reçue.

Division des thèses canadiennes
Direction du catalogage
Bibliothèque nationale du Canada
Ottawa, Canada K1A ON4

THE UNIVERSITY OF ALBERTA

AN ANALYSIS OF DETERMINANTS RELATING TO FOOTBALL COACHING EFFECTIVENESS

by

GARY HAROLD NAYLOR

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF ARTS

DEPARTMENT OF PHYSICAL EDUCATION

EDMONTON, ALBERTA

FALL, 1976

ABSTRACT

The major problem investigated in this study was the relationship between various determinants of coaching ability and actual coach effectiveness as measured by team performance. Secondary problems included an analysis of leadership styles as defined by other researchers.

Data was collected through a personal interview-questionnaire situation arranged with fifty amateur head coaches of football teams in the province of Alberta.

Descriptive data collected on the sample indicated that all respondents were teachers, with the majority having an academic background in physical education. Only four of the coaches had not played football with the positions of quarterback, running back, and offensive end being over represented in the group. Assistant coaching was not an indicated prerequisite for this group of head coaches whose teams had won 64.32 percent of their league games.

Conclusions

1. No significantly high relations were reported between measures of coach effectiveness and coach training, coach experience, or coach leadership style. These results were in the expected direction based on other research findings.
2. A measure of coach-team relations was found positively related to team performance. Both the effects of winning on the coach and the efforts of the coach to improve coach-

team relations were suggested explanations. Further evidence in support of the social-emotional role of the coach was provided by the slight relationship shown between the coach's perception of his effectiveness in these aspects and actual team performance.

3. Analysis of the variables on leadership style indicated no significant relationships between them and other measurements used in this study.
4. As had been found in other investigations, football coaches tended not to be authoritarian.

ACKNOWLEDGEMENTS

The author wishes to express his appreciation to committee members Dr. Gerry Glassford, Charles Moser, and Dr. Murray Smith for their expert guidance throughout this thesis.

A special thanks is extended to Dr. Murray Smith for his advice leading to substantial improvements in the design and scope of the questionnaire. To Dr. Garry Smith, committee chairman and close friend whose great interest, assistance, and encouragement made the completion of this project possible, the deepest gratitude is extended.

In addition, sincere thanks is given to the executive of the Alberta Football Coaches Association, Mr. John Semkuley, administrator of the Calgary High School Football League, and all the coach interviewees who made the collection of the data possible. To these individuals and unnamed others who provided support and friendship during the past several years of study, grateful recognition is given.

Finally, words cannot express the love and esteem I have for my wife Carolyn who forbear these many hours away from the home and family.

TABLE OF CONTENTS

CHAPTER		PAGE
I	STATEMENT OF THE PROBLEM	1
	Introduction	1
	Need for the Study	2
	The Problem	4
	Limitations	4
	Delimitations	5
	Definition of Terms	6
II	REVIEW OF LITERATURE	7
	Introduction	7
	Leadership Style and Group Productivity	12
	Leadership Style	18
	Group Atmosphere	20
	Leader Training, Experience, and Group Productivity	22
	Determinants of Coaching Effectiveness	25
III	METHODS AND PROCEDURES	28
	Sample	28
	Data Collection Procedure	28
	Questionnaire	28
	Statistical Treatment	31

CHAPTER PAGE

IV RESULTS AND DISCUSSION..... 33

The [redacted]le..... 33

Coaching Effectiveness Correlates..... 46

Coaching Motivation Style Correlates..... 58

Coaching Authoritarianism Correlates..... 60

V SUMMARY AND CONCLUSIONS..... 61

Summary..... 61

Conclusions..... 62

Implications..... 63

Recommendations..... 66

BIBLIOGRAPHY..... 68

APPENDIX: COACH QUESTIONNAIRE..... 71

LIST OF TABLES

TABLE		PAGE
1	Pearson Product Moment Correlation Coefficients Between Measures of Coaching Effectiveness and Training.....	48
II	Pearson Product Moment Correlation Coefficients Between Measures of Coaching Effectiveness and Experience.....	50
III	Pearson Product Moment Correlation Coefficients Between Measures of Coaching Effectiveness and Coach-Team Relations.....	53
IV	One-Way Analysis of Variance Between Means of GA Scores and Coaching Effectiveness Levels.....	53
V	Duncan Multiple Range Test to Differentiate Means of GA Scores.....	54
VI	Pearson Product Moment Correlation Coefficients Between Measures of Coaching Effectiveness and the Coache's Self-Rating of Effectiveness.....	56
VII	Pearson Product Moment Correlation Coefficients Between LPC Score and Various Coach Improvement Scale Measurements.....	59

LIST OF FIGURES

FIGURE		PAGE
1	Number of Positive, Zero, and Negative Relationships Between Leader Behavior and Group Productivity.....	12

CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

Small groups of individuals working interdependently on teams, committees, or crews is a common phenomenon. The effectiveness with which these groups accomplish their tasks is thus of practical as well as theoretical concern.

Groups and organizations succeed and thrive under effective leadership and frequently fail or sometimes may even disintegrate under ineffective leadership. Extensive scholarly research has been carried out in an attempt to better understand leadership, but few attempts have been successful in providing a general framework to help explain how a leader's personality attributes relate to his group's performance.

In addition, it has been commonly accepted by researchers in the field of leadership that the leader's previous training and experience as well as his general attitude toward professional improvement were important factors in effectiveness. This may be the case, however, these assumptions have not been verified scientifically.

This study was designed to fill some of these gaps in leadership research by providing a detailed and systematic analysis of football head coaches as to the relationship between their past experiences, present attitudes, and effectiveness as leaders.

Need for the Study

Are there certain experiences and attitudes that are necessary in determining the effectiveness of a leader? If so, how could the training and experience of our leaders be better structured? This is of particular significance in coaching football because of the opportunities for improvement provided through football clinics, university football courses, and the recently initiated national football coaches certification program. These are examples of vehicles available for the dispersal of important information on the topic of coaching as a leadership role, often neglected presently. Therefore there is a very practical concern for this kind of study.

The theoretical issue involves the need for substantiating and testing current theories in the area of leadership. The leadership measures used in this study have been developed through a theoretical framework supported by over twenty years of intensive research. Unfortunately, little of this research has been done on coaches of teams.

More specifically, much controversy has surrounded the general area of the most appropriate attitude and behaviors for coaches of football teams. Although the ultimate goal of achieving top performance seems to be constant among coaches, widely different means to this end are practiced. At one end of a continuum are the "hard-nosed", authoritarian (Tutko and Richards, 1971) figures who are noted for their unquestioned and rigid individual player and team policies, as well as their general aloofness from team members,

and direct emphasis on the task at hand. These coaches, try to run their teams like well oiled machines, each team member expected to give entirely of himself for the cause.

At the opposite end are the "nice-guy" (Tutko and Richards, 1971) democratic leaders who attempt to accomplish the task by providing a maximum opportunity for player involvement in making decisions, seeking a close interpersonal relationship with team members, and by emphasizing the individual and team enjoyment of the experience.

In addition to examining these issues, a test of Fiedler's work regarding training and experience will be included. Their findings resulted in a new interpretation of leadership experience and training in an effort to explain why the literature and their own research reported no consistent relations between these areas of leadership development and group effectiveness (Fiedler and Chemers, 1974).

Another need for this kind of study is that very little research has been done on Canadian amateur coaches. It seems quite possible that the socialization and situational factors existing in Canadian sport, especially at the amateur level, may be unique. If this is true, then the attitudes and perceptions of the successful Canadian coach could be different from coaches in other countries.

Little research has been done to provide a scientific basis for understanding the area of coaching effectiveness. Analyzing various relationships surrounding the football coach and his team's performance, this study attempts to provide some rationale from which discussion of effective coaching could occur.

The Problem

The major purpose of the study was to examine the relationship between the head coach and team performance of football teams. This analysis was in part guided by the social psychological theory of leadership effectiveness as advanced by Fiedler (1967).

The following issues were of prime importance in the investigation.

1. Was there a relationship between the coach's motivational style and his team's performance? Was there a significant difference between coaching motivational styles of successful as compared with unsuccessful coaches?
2. Was being the head coach of the team considered to be a favorable leadership opportunity in terms of coach-athlete relations? Was the head coach's perceptions of his relations with the team related to team performance?
3. Were there relationships between a coach's training and his team's performance or his coaching motivational style? Was there a relationship between number of years of coaching experience and team performance? Was there a relationship between successful past experiences with football and coaching effectiveness?
4. Were coaches of amateur football teams authoritarian? What relationships were there between authoritarianism and coach leadership style or team performance?

Limitations

1. The prime limitation of the study was the selection of respon-

dents which included only those available for an interview during July in 1975.

2. The study was limited by it's use of instruments, two of which had not been tested previously.
3. The study involved respondents who coached at one or more of three levels of the five levels of coaching, therefore limiting the generalizations of results.
4. Information on the actual effectiveness of the coach's team was provided by the coach himself. It was hoped that this problem could be partially overcome by the fact that the author was personally acquainted with most of the coaches involved, thereby resulting in accurate responses.
5. The study was limited by the lack of scientific research completed on coaches of teams in general, and more specifically coaches of Canadian amateur football teams.

Delimitations

1. The number of respondents was delimited to fifty.
2. The type of respondents included only head coaches of twelve man high school, junior and university football teams in Alberta. Each respondent had been a head coach for at least two years since 1970.
3. The method for collection of the data involved a structured interview-questionnaire situation with each respondent.

Definitions of Terms

Coach: The head coach, the individual who has the final authority in regards to team operation and decisions.

Coach Effectiveness: Measured in terms of his team's performance, or percentage of games won in league competition, including all years as a head coach.

Coach Experience: Refers to the number of years in the position of head coach.

Coach Motivational Style: As defined by Fiedler, refers to an underlying need structure which motivates his behavior in the role of a head coach, as measured by his score on the Least Preferred Coworker (LPC) scale (1967).

Coach-Team Relations: The degree to which the coach feels accepted by the team and is relaxed and at ease in his role. Measured by the Group Atmosphere Scale (GA) (Fiedler, 1967).

Coach Training: Indicated by any developmental experience in the past or present which affected his head coaching ability and therefore his team's performance.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Perhaps Peyre, in his treatment on "Excellence and Leadership," expressed it appropriately when he said:

> There are at least three subjects...on which no wise man should ever attempt to write: love, genius, and leadership. Of the three, the last is the most mysterious and the most unpredictably and capriciously feminine (Groubard, 1962, p. 1).

Certainly the ambiguity of the term leadership in social-psychological theory as well as in the area of coaching athletic teams has resulted in extensive but divergent thought and research.

The literature to be reviewed will deal primarily with theory and research on leadership situations similar to that of the football coach. Despite the fact that scholars know that group climate is a key factor in determining leader performance, scientific thought and investigation in the area has not yet been able to completely differentiate between the various group situations and precisely how they relate to leader effectiveness.

Because a knowledge of the characteristics or properties of groups is such an integral part of leadership research this aspect of the problem will be discussed first. A base will be provided from which to analyze other pertinent literature. It will certainly become evident that there has been a limited amount of scientific study which pertains directly to the coaching of sports teams.

The football coach is considered to be the formal leader or "head man" of the group because he is appointed to the position by a higher authority. This distinguishes him from the emergent leader who emerges from a previously leaderless group without the benefit of institutional appointment (Fiedler and Chemers, p.6). The data on emergent leaders comes from studies of laboratory groups on dimensions of behavior identified as those of emergent leaders responding to functional demands of the group (Stogdill, 1959).

The characteristic behaviors associated with emergent leadership are frequently different than those associated with the formal leader. Indeed, the emergent leader is that member who best satisfies the group needs at the time. This allows for considerable role flexibility which is often not possible for the formal leader, although often expected of him (Shartle, 1957). In contrast, the formal leader, because of his appointment will have certain institutional expectations guiding his behavior in addition to the challenge of achieving authority of leadership with respect to his group's purposes. The problem is one of being able to satisfy the expectations of the institution and the group simultaneously. Relevant leadership research needs to take into account both sets of expectations.

Group size is an important factor which affects leader-member relations and the type of leadership necessary for achieving task oriented goals. Research in this area suggests that satisfaction with the supervision differs with the size and composition of the group. Democratic leadership is most satisfying in small, interaction-oriented groups, while autocratic leadership satisfies group members most in

large task-oriented groups. Neither styles of leadership can be advocated as a method for increasing productivity (Stogdill, 1974). Once again, most of the studies done in this area were performed in small laboratory group situations.

A football team is a group made up of approximately forty individuals. The highly specialized nature of their tasks, evident by their division into several smaller groups much of the time, demands a very high level of organization and structure. In an attempt to distinguish between the terms group and organization, Stogdill indicated that an organization is a special kind of group.

> An organization may be defined as a social group in which members are differentiated as to their responsibilities for the task of achieving a common goal (1950, p.2).

Although this definition does not take into account group size and is most applicable to the emergent leader situation, it is relevant to the nature of the leadership situation examined in this study.

A very limited amount of study has been done on large complex hierarchical organizations but indications are that the type of leadership required here is much different from that which was successful in the small laboratory group (Gibb, 1969).

The football team group operates on a seasonal basis; for approximately three months each year commencing in late August and terminating in early November. Considering the time span in which this group exists, it is important to determine which leadership factors are most important if task accomplishment is a primary aim. Research or thought regarding this leadership variable is negligible. Sherif and Sherif (1956) found

that enduring groups develop organization and structure and these form a very influential part of the situation to which leadership must be related. Their study involved small laboratory groups and did not analyze leadership effectiveness. Perhaps group longevity is not related to leadership style or other factors but the fact remains that a tremendous amount of organization, interaction, and decision making takes place over a comparatively short period of time. These factors would seem to justify investigation into this variable.

An examination of the method by which football teams accomplish their task would provide further clarification for study purposes. The intent here is to clarify the fact that this group perceives themselves as working interdependently toward achieving a common goal rather than being members of a group working individually on a task. Further elucidation is necessary here to distinguish between the two methods that could be used by a group working towards a common goal. For example, a wrestling team score is made up of points attained by each of their team members in individual matches. Each contributes to the team score but independently of one another. In contrast the result of a football game including points for and against depends on the coordinated efforts of individual members in their attempt to overcome the opposition. Fiedler, in his extensive study on leadership effectiveness has distinguished between interacting groups and coacting groups. Interacting groups consist of members working cooperatively and interdependently on a common task.

> The contributions of individual members of these groups cannot, therefore be readily isolated, and the members for this reason, are typically rewarded or penalized as a group (Fiedler, 1971, p.2).

Co-acting group members perform their tasks in relative independence of one another, as for example, members of bowling teams. Employing Fiedler's definition then, the football team would be considered an interacting group.

One of the leaders major tasks therefore, would be to help coordinate the various tasks of the group members by directing, channelling, and guiding their work towards successful task completion (Fiedler, 1967).

An attempt has been made to classify the leadership situation involving a football coach in terms of leadership selection and group structure as it relates to size and longevity or stability, and the method by which the group accomplishes it's task. The study of sports teams, especially in regards to leadership phenomena has been neglected by researchers. It may well be that current leadership study will provide the important information and theory necessary for the successful leadership of sport teams. Conversely, it could be possible because of factors unique to sport team situations, that the necessary ingredients for effective leadership are different too.

Now that the basic framework has been established concerning the specific type of leadership situation being investigated in this study, an overview of relevant theory and research will be presented. Areas to be reviewed include: the effects of leadership style or behavior on group task performance, leader training and/or experience and group task performance, and pertinent sports team leadership literature.

Lea[redacted]p Style and Group Productivity

As a base for discussion in this area, Stogdill (1974) has provided a comprehensive review of the literature in this area. In his summary chapter on "Leadership and Group Performance" there is an outline of the results of research efforts relating group productivity and various styles of leader behavior (p. 404). A summary of Stogdill's review is presented in tabular form.

Variables Related	Direction of Relationship		
	Positive	Zero	Negative
Productivity and			
Democratic	3	11	
Permissive	7	3	4
Follower-oriented	19	5	4
Participative	10	5	3
Considerate	8	8	3
	47	32	14
Productivity and			
Autocratic	3	10	1
Restrictive	2	3	1
Task-oriented	3	3	3
Socially distant	16	1	1
Directive	10	4	1
Structured	13	5	
	47	26	7

FIGURE 1

Number of Positive, Zero, and Negative Relationships Between Leader Behavior and Group Productivity

The several patterns of person-oriented behavior (democratic, permissive, participative, follower-oriented, and considerate) were grouped together as well as the work-oriented behavior (autocratic, restrictive, task-oriented, socially distant, directive, and structured). These terms as used by various researchers were considered by Stogdill as a conglomerate pattern and were analyzed individually in terms of their relationship to productivity.

> The conclusion to be drawn from these studies is that both person oriented and work oriented behaviors may under certain circumstances be related positively to leadership. Person-oriented behaviors, more often than work-oriented behaviors are negatively associated with productivity (Stogdill, 1974, pp. 403-404).

After using a similar method of relating leader behavior to other effects produced, Stogdill provides a final summary statement.

> The results of the analysis do not confirm any simplistic or polarized theory of leader behavior and group response. The results suggest, rather, the operation of interaction effects. A pattern of behavior effective in one situation is not necessarily effective in other situations. In view of the complexity of leader behavior and the variety of situations in which it functions, a conditional and multivariate hypothesis seems more reasonable than a simplistic, bipolar view of the leader-follower relationship (p.407).

The conglomerate method of analyzing research done in a particular area helps to focus on common approaches to the problem and their results. However, any conclusions drawn can only be derived from research relating to similar situations using similar measurements. Although he recognized problems of classification, definitions, and measurements in his introduction, Stogdill continued to attach some meaning to an analysis of each conglomerate pattern by summing posi-

tive relationships as against zero and negative relationships for each grouping. As a result, individual research programs within this conglomerate grouping showing more significant relationships between leader style and group productivity, may have not been given just consideration.

Therefore, a closer analysis of the research showing the most positive relationships between leader behavior and productivity will be undertaken.

Work-oriented behavior patterns indicated as directive, structured, or socially distant by various researchers tended to be related to productivity.

> Directive leadership implies that the leader plays an active role in problem solving and decision making and expects group members to be guided by his decisions (Stogdill, p. 386).

A closer scrutiny of the research completed here reveals a number of weaknesses that make it difficult to generalize from their results.

1. As cited in two of the research studies initiated by Lange et al. (Stogdill, 1974, p. 389), both directive and participative leadership were reported as being positively related to group performance.

These studies were grouped with other investigations showing similar results involving only directive patterns of behavior. The cumulative effect could have been interpreted as only directive behavior being effective, when actually both methods tested were effective. This factor further weakened the case for directive behavior which included ten studies showing positive relationships and five indicating zero or negative relationships.

2. Some lack of consistency in terminology or definition of directive behavior (directive versus participative, task oriented versus interaction oriented, positive versus negative), and in measurement of productivity (problem solving, corporate profit, and error avoidance) did not provide general support for further analysis of the directive leadership style.

Indeed, it could only be suggested that group productivity is not related consistently to a directive style of leader behavior.

A more promising relationship was established between a structurered style of behavior and productivity as indicated by thirteen studies indicating a positive relationship opposed to five showing no relationship (Stogdill, 1974, p. 397).

An extensive body of research consistent in definition and technique for measurement was included.

> The Leader Behavior Description Questionnaire, developed by staff members of the Ohio State Leadership Studies, consists of two strongly defined subscales - consideration and initiation of structure. The scales are used by followers to describe the behavior of their leaders. Forms were developed for self-descriptions, and also for description of ideal or expected behavior (Stogdill, 1974, p. 393).

Further analysis of the positive relationships reported in these studies indicated that group productivity was related to structuring behavior in seven of the studies, and to an interaction of consideration and structure in six investigations. Although this type or style of leader behavior was moderately related to productivity, there was no clear delineation of the most appropriate form of leader behavior.

Perhaps more research done on task groups similar in nature would more clearly indicate the desired pattern of behavior. Another possible solution to the problem might involve a reinterpretation of leadership behavior. Fiedler and his associates (1969, p.40) have recently attempted this. Some of their preliminary findings are outlined below:

> We must first of all distinguish between leadership style and leader behavior. Leader behavior refers to the specific acts in which a leader engages while directing or coordinating the work of his group. For example, the leader can praise or criticize, make helpful suggestions, show consideration for the welfare and feelings of his group.
>
> Leadership style refers to the underlying needs of the leader that motivate his behavior. In other words, in addition to performing the task, what personal needs is the leader attempting to satisfy? We have found that a leader's actions or behavior sometimes does change as the situation or group changes, but his basic needs appear to remain constant.

Taking this interpretation into consideration, previous studies on leader behavior would have had considerable difficulty in showing consistent relationships between leader behavior and group production because the leaders behavior was governed by his underlying need structure. Depending on how he interprets the situation, the leader would behave to satisfy this need structure.

Various research studies give considerable support to this interpretation. Sixteen studies reported a positive relationship between social distance and productivity, while two investigations demonstrated a lack of positive relationships (Stogdill, 1974, p. 385).

An overview of the theory behind this research was provided by Shaw and Costanzo (1970, p. 315):

> The general approach adopted by Fiedler was based on the assumption that the leader's perceptions of his co-workers reflect task relevant attitudes that influence group interaction and performance. Measures of interpersonal perception were first developed for research on psychotheropeutic relations (Fiedler, 1951) and later adopted to the study of leadership. Studies of the relationship between measures of interpersonal perception and group effectiveness yielded apparently contradictory results; the contingency model represents an attempt to reconcile these data. The general theoretical model assumes that the type of leader that will be most effective depends upon the favourability of the situation to the leader, which in turn depends upon affective leader-group relations, task structure, and the leader's position power.

In Fiedler's research program relating leadership to group productivity samples of both experimental and field groups included basketball teams, student surveying teams, bomber crews, tank crews, and other groups and organizations.

> Well over 800 groups were studied between 1951 and 1963, and the theory was based on the findings of these various studies (Fiedler and Chemers, 1974, p. 79).

Validation studies reported in 1972, tested and extended the Contingency Model of leadership effectiveness. The model was strongly supported by data collected on field studies suggesting the predictability of leadership performance in real life groups (Fiedler, 1971).

Certainly Fiedler's work seemed to have revealed important relationships between leadership style, the favorability of the situation, and group performance. For purposes of the present study, a few of the concepts developed in this theory were of interest, particularly those of leadership style and group atmosphere. These concepts as well as certain instruments designed by Fiedler were utilized in this study.

Leadership Style

Leadership style is basically a personality measure which is the key variable in the contingency theory. This variable is measured by Fiedler's highly validated "Least Preferred Co-worker" (LPC) scale. An LPC score is obtained by asking the leader to think of everybody with whom he has ever worked and to describe the person with whom he would work least well. Each item on a simple bipolar scale was scored from one to eight, with eight as the most favorable point on the scale. The LPC score was the sum of the item scores. Usually a scale of sixteen items was used (See Appendix).

The scale was shown to have very high internal consistency in the range of .90 to .93 on the split-half reliability. This meant that the person who described his least preferred co-worker negatively on some items also described him negatively on other items.

The test-retest reliability of LPC measured the consistency of the score over certain periods of time and varied from .30 to .90, well within the range of the better personality scales (Fiedler and Chemers, 1974, p. 98).

What does the LPC score measure? The answer to this question has lead to various re-interpretations. It had been regarded as a measure of social distance (Stogdill, 1974), a measure of task-oriented or person oriented motivational systems (Fiedler, 1967), and more recently a measure of the leaders ability to differentiate in his perception and evaluation of the interpersonal environment (Mitchell, 1970; and Foa, Mitchell, and Fiedler, 1971).

> It now appears that LPC is an index of a motivational hierarchy, or of behavioral preferences, implying that some goals are more important to the individual than others (Fiedler and Chemers, 1974, p. 74).

Individuals appeared to pursue their more basic goals in unfavorable situations in which they felt that they were uncertain or threatened. Secondary goals were pursued in favorable situations in which they feel that their primary goals were secure. High LPC persons sought as their primary goal a relation with others while status and esteem were secondary. Low LPC persons pursued task achievement as their primary goal and as a secondary goal, good working relationships with group members (Fiedler, 1972).

Although LPC scores had been correlated with innumerable tests and measures, none of which yielded consistent relations (Fiedler and Chemers, 1974, p. 99), Mitchell (1970) and Garland (1975) produced evidence indicating that LPC was a measure of cognitive complexity. High LPC persons were thought to have more complex thought processes than low LPC persons.

The relationship of LPC score to group performance was entirely dependent on the favorability of the situation for the leader. The low LPC or task-motivated leaders performed best in very favorable or very unfavorable situations in terms of their influence and power. In contrast, the high LPC or relation-oriented leaders performed best in situations in which their power and influence were moderate (Fiedler, 1967).

Earlier investigations on sociometrically chosen informal leader-members of basketball teams indicated that effective teams in terms of

percentage of games won had leaders with a low LPC score. This strongly suggested that the successful teams were concerned first with performance and second with good interpersonal relationships.

Other studies done on informal leaders and formally appointed leaders indicated that the low LPC leaders were more effective on task groups where the leader has considerable power in his group (Fiedler, 1960).

Although no scores for the coaches of the basketball teams were used, it could be said that the formal coach because of his ultimate authority and influence on the team condoned or promoted certain attitudes and goals of the team members. His style therefore could be related to the values and priorities of team members and informal leaders. If this was the case, then the effective basketball coach would have a similar motivational style to the informal leader on the team so that the major goal of the team could be pursued in relative harmony. This would mean that a task-oriented or low LPC coach would be most effective.

Using Fiedler's studies as a point of departure, this study attempts to extend Fiedler's work by using the LPC score but also incorporating variables such as leader training and leader effectiveness.

Group Atmosphere

Defined as the interpersonal relationship between the leader and his group members, this variable seemed to be the most important one in determining the leaders power and influence over the group (Fiedler

and Chemers, 1974; and Fishbein et al., 1969).

established as more or less favorable depending on the results of Fiedler's group atmosphere scale.

On one test the member involved was asked whether they accept or endorse their leader by a sociometric preference scale. This scale was devised for informal leader situations.

> An alternative method for identifying leader-member relations is the short 'Group Atmosphere' (GA) scale. This measure consists of ten eight-point bipolar items which can be answered in the span of two or three minutes. The leader is simply asked to describe his work group on this scale (Fiedler and Chemers, 1974, p. 65).
>
> A summation of the item scores yields a quite reliable and meaningful Group Atmosphere score, which indicates the degree to which the leader feels accepted by the group and relaxed and at ease in his role (Fiedler, 1962, p. 308).

Although these perceptions of group atmosphere may be different than the actual feelings of the members of the group, the leader behavior will be much more affected by how he thinks his subordinates feel about him.

What relationship, if any, existed between leader-member relations and the performance of the group on the task? More specifically, was there a relationship between the coach-team member relations and success of the team measured by percentage of games won? What kind of leader-member relations tend to exist between coaches and their football teams?

Although used for different purposes than in Fiedler's model, the measurement of group atmosphere and it's interpretation were useful in providing an opportunity to assess these relationships held to be very important in coaching football.

An attempt was made to review the pertinent literature in the area of leader style and group productivity, and to discuss in some detail two instruments used in this study. In the next section, two other important variables and their relationship to group productivity are discussed, these are the leader's training and experience.

Leader Training, Experience, and Group Productivity

What effect did the leader's training and/or experience have on his group's ability to accomplish major assigned tasks? Although much importance was attached to these factors in terms of leadership development, little legitimate scientific evidence was available to confirm the positive relationships expected. Stogdill (1974, p.191), in his review of the literature, found four studies indicating that productivity increased as a result of leader training, however it was indicated that controls in these studies were less than adequate. Another five studies using control groups demonstrated that leaders who had experienced training were less productive than control groups.

In a final summary statement Stogdill "concluded that the research on leadership training is generally inadequate in both design and execution"(1974, p. 199). Other investigators concurred with Stogdill on this and reference was made to the lack of objectively evaluated leadership training programs, especially in terms of group or organizational performance (Fiedler and Chemers, 1974; Dunnett and Campbell, 1968; and House, 1967).

Fiedler and colleagues provided a program of research attempting to define these relationships. In a composite analysis of 385 managers and supervisors from twelve different sets of groups and organizations, the relations between years of leader experience and his group's performance were analyzed. The median correlation for all groups was -0.12 (Fiedler, 1970, p. 10).

In comparisons of trained and untrained leaders by various researchers in experimental and field groups, it was demonstrated clearly that the amount of training did not improve a man's managerial performance (Fiedler and Chemers, 1974).

In an attempt to explain these rather surprising findings a reinterpretation of leadership training and experience within the framework of the Contingency Model was provided.

> Basing our argument on the Contingency Model, which says that the leader's motivational orientation and his situation interact to determine his effectiveness, we have reconceptualized the psychological meaning of training and leadership experience as a way of giving the leader a more favorable leadership situation, one which gives him more control and influence. The effects of an increase in favorableness on performance will be mediated by the motivational orientation of the leader (Fiedler and Chemers, 1974, p. 137).

This theory was supported by a host of investigations and helped to explain the inconsistent results obtained earlier. Therefore, although training and experience helped the leader to increase his control and influence, the effectiveness of this influence depended on the match between leader motivation (LPC) and the situation.

In later studies predicting that task-relevant training and experience made the situation more favorable in the task-structure

dimension, test results were in high agreement. Also Chemers and his associates (1973) provided results which clearly indicated that training had different effects on relationship and task-oriented leaders.

In research done comparing the effects of leadership experience and training Csoka's findings supported the Contingency Model explanation, but he also found that leader intelligence and experience interact in determining the leader's "expert" power and thus the relationship between leader motivation and performance. That is, less intelligent leaders appear less able to learn from experience (Csoka and Fiedler, 1972).

Once again the limited scientific research in the area and the substantial amount of conjecture lead to an investigation of relationships between coach training, experience and effectiveness of their teams. Training included past and present educational and sport experiences which may have contributed to their effectiveness. This definition of training differed from previous research reviewed in that experiences considered developmental prior to the attainment of the head coaching position were included. For example, was there any relationship between playing experience and effectiveness?

The literature reviewed to this point represented an overview of general leadership theory and research relevant for this study. An examination of the scientific sports literature available provided little information on coaching effectiveness.

Determinants of Coaching Effectiveness

Few attempts had been made to analyze coaching effectiveness scientifically nor have they made use of available leadership research theory or measures. As a result no plausible composite picture of the factors relating to successful coaching was available.

Several studies used other than team productivity as measures of effectiveness. Self ratings by coaches and players on degree of coach effectiveness (Percival, 1971), and personality measures of high level coaches (Hendry, 1969; and Ogilvie, 1965) were examples. Percival's study demonstrated that the coach rated himself higher on effectiveness than his athletes although at the high school level ratings were somewhat similar. A Coach Self Rating Scale was devised for this study. The coach was asked to rate his ability or effectiveness on several criteria deemed important to head coaches. He indicated his degree of satisfaction on a five point scale (See Appendix). This score was correlated with actual effectiveness in terms of team performance.

In a study of the relationship between perceptual accuracy and coaching effectiveness as measured by percentage of games won, Widmann (1969) found that similar perceptions occurred between the coach and players on successful teams. The coaches had three years of experience and were considered successful if they won fifty-one percent of their games. In another investigation, this time relating leadership style of amateur hockey coaches as measured by the LPC score and win-loss ratio, a significant relationship was demonstrated. Found

unrelated to coaching effectiveness were variables of coaching experience, playing experience, and observed coaching behaviors (Danielson, 1974).

Both Luschen (1969) and Singer (1975) concurred with Fiedler's basic theory which emphasized that the interaction of the leaders personality with the situation determined the effectiveness. Myers and Fiedler (1966) discussed the application of Fiedler's theory to effective leadership in a sport situation. They concluded that the specific situation was as important in leadership as the traits and skills of leaders and therefore recommended that the favorability of the situation be adjusted to the coach and not vice versa.

Much publicity had been given to the so-called authoritarian nature of coaches wherein athletes were treated like machines or pawns (Riesman and Denny, 1951; Scott, 1971; Meggyesy, 1971; Shaw, 1972 and Edwards, 1973). Research studies in this area by Sage (1974) and Bain (1973) did not support these charges. In fact, Bain found that the coaches group scored lower on authoritarianism than two control groups composed of educators and respondents from the general male population. Within the coaches group, younger coaches tended to score higher on authoritarianism.

To provide more evidence in this area, Bain's Coach Attitude Behavior Scale (CAB) was used in this study. Another relationship examined was coach authoritarianism and effectiveness (See Appendix).

In a large study on the relationship between position played and upward mobility to management in baseball, tentative support was given

to the prediction that interactional constraints associated with the type of position occupied are related significantly to chances for obtaining managerial office. Pitchers and outfielders were underrepresented among the managerial group while catchers, first basemen, second basemen, third basemen, and shortstops were overrepresented (Grusky, 1963). Football teams also had high interaction versus low interaction positions. Was there a relationship between position played and upward mobility to coaching in football? These relationships were also analyzed in this study to determine if these findings hold in a football context.

CHAPTER III

METHODS AND PROCEDURES

Sample

Head football coaches from fifty amateur teams representing twelve man high school and post high school football in the province of Alberta served as respondents in the study. Each respondent had coached at least two years since 1970.

Data Collection Procedure

Initially, lists of football coaches were provided by the Alberta Amateur Football Coaches Association executive and from the administrator of the Calgary Senior High School football league. Individual appointments were arranged with all available coaches from the sampling lists.

Testing was done in the form of a structured interview format with each interview taking an average of forty-five minutes. The interviewer provided any clarifications necessary on questionnaire items.

Questionnaire

The questionnaire (See Appendix) provided data on 114 variables classified as personal data, training data, experience data, effectiveness data, coaching style data, and coach-team relations data. All personal and background information was recorded by the researcher in a structured interview. Other items, including the various scales were completed by the respondents on the questionnaire. All scale items were

introduced on the questionnaire by detailed instructions.

Personal data such as age, marital status, number of dependents and religious denomination, were recorded for descriptive purposes.

Any experiences considered developmental for coaching purposes were classified as training data. These included academic background, teaching experience, coaching sports other than football, football playing experience, football assistant coaching experience, time spent on coaching football, and methods used to improve football coaching ability. For the purposes of analysis, most of the data was left in it's raw form. Time spent in coaching during mid-season was recorded in actual hours initially, but compressed into three categories for ease of analysis. The time spans used corresponded to less than average, average, and more than average number of hours spent per week on the field practicing or in preparation time. From six to nine hours was thought to be an average amount of time spent for either practices or preparation.

On the job training was measured by a Coach Improvement Index Scale developed by Dr. M.F. Smith, Faculty of Physical Education, University of Alberta. In an attempt to exhaust the ways in which a coach actually could improve, thirty-four possibilities were listed plus an open-ended question to account for any alternative means. The coach was asked to indicate how helpful each method was on a five point scale (see Appendix). It was made clear to each respondent that they should indicate what had actually helped them improve, not what they thought

should help or might help. Because of the exploratory nature of this scale, a variety of possible relationships were examined.

Coaching effectiveness data was recorded as percentage of games won in league play and the number of championship teams coached. Percentage of games won was further divided into less successful, average success, and most successful coaches. Coaches who said their teams won between sixty and 75 per cent of their games were considered average in success in this sample.

In addition to the previously mentioned measures of coach effectiveness, a coaches self rating scale on effectiveness was developed which examined task-oriented or conversely social-emotional oriented responsibilities of the head coach. Individual items and grouped scores were used for measurement purposes.

Measurements of coach motivation or style were obtained through the respondent's completion of the Least Preferred Coworker (LPC) and Coach Attitude Behavior (CAB) scales. The LPC score, was a key variable in this study as it was related to the coaching effectiveness variables.

The CAB scale was developed by Bain "to measure the relative amount of authoritarian attitude and behavior of coaches as it pertains to athletic coaching situations" (Bain, 1973, p. 59).

The scale is composed of 25 statements all expressing a positive authoritarian attitude or behavior. The respondent indicates his agreement or disagreement with the statement on a six point scale ranging from "I agree very much" to "I disagree very much". Scores were to-

talled to form an authoritarian index.

Information on coach-team relations was collected through the use of the group atmosphere (GA) scale devised by Fiedler. All respondents were asked to rate the atmosphere of the teams they had coached over the past two years on a bi-polar eight point scale involving a total of ten items. Final scores were tabulated to form a group atmosphere index. Individual and grouped scores were used. The grouped scores were an indication of extremely favorable versus less favorable leader-member relations.

Statistical Treatment

A descriptive analysis of all variables was provided through the calculation of frequency distribution, means, and standard deviations.

On the basis of the existing literature in the area, several hypotheses were posed. These hypotheses are listed below along with the proposed statistical treatment of each of the relationships. Pearson Product Moment Correlation Coefficients were computed to test many of the relationships. Probabilities were computed and significance was accepted at the .05 level of significance.

1. There are no relationships between various measures of coach effectiveness and coach training, coach experience, coach leadership style, and coach-team member relations.

   Pearson Product Moment Correlation Coefficients were computed between all measures of coach effectiveness and other listed variables. In addition, a further analysis of most successful, average success, and least successful coaches

was proposed. These levels of coaching success were used to break down other variables into mean values. These mean values were analyzed by a one way analysis of variance with significance accepted at the .05 level.

2. There is no relationship between coach motivational style (LPC) and other variables including time spent on coaching, coach self-rating of effectiveness, and methods used to improve coaching.

   To test the relationships, Pearson Product Moment Correlation Coefficients were computed.

3. There is no relationship between coach authoritarianism (CAB) and coach effectiveness, coach leadership style (LPC), age, teaching experience, head coaching experience, and total football coaching experience.

   Again these relationships were tested using the Pearson Product Moment statistical technique.

CHAPTER IV

RESULTS AND DISCUSSION

The Sample

Prior to examining the specific relationships being investigated, a descriptive analysis of the sample will be presented.

The mean age of the respondents was 34.140 with a range of twenty-one years from 26 to 47. Of the 50 coaches included in the study, 48 were married with 39 having one or more children.

Physical education was a major area of interest within the sample as thirty-six of the respondents held undergraduate physical education degree, and 47 respondents had taught physical education in schools for an average of 8.58 years. All fifty of the respondents had been teaching in various educational institutions for an average of 9.620 years.

Amateur football in Alberta above the beginning level is operated almost exclusively by educational institutions. Therefore it is to be expected that most of the coaches would be teachers, probably with a major interest or background in physical education. For purposes of this investigation, it should be noted that the sample being dealt with is quite homogeneous with respect to academic background and occupation.

Forty-six of the coaches had football playing experience averaging 6.78 years with a mean of 3.28 years of experience above the high school level.

Of interest was the possible relationship between position played and upward mobility into a coaching role as has been investigated by

Grusky (1963) with baseball managers. Of the 46 coaches with playing experience, 31 of them played offensive positions primarily. A further examination of individual positions played using a weighted rating showed that coaches who had played quarterback, running back, and offensive end were over represented in this group, while coaches who had played offensive tackle, defensive line, offensive centre, and wide receiver were under represented.

Positions involving multiple skills including opportunities for having possession of the football were overrepresented. These are the "glory" positions of amateur football most often producing the team's scoring leader. These players are normally among the best athletes on the team because they are required to perform a number of skills such as blocking, pass receiving, and running with the ball. Because of their maximum involvement both physically and mentally, it could be that they develop a more complete understanding of the game than those playing more isolated and less demanding positions.

In contrast, commonalities among coaches who had played positions under-represented in this study were not as clearly defined although these positions do require fewer skills with very little opportunity for ball carrying. All positions, except one, were line positions most of which were assigned to the less athletic type. The wide receiver in amateur football plays an isolated position by design and is used sparingly on most teams. Certainly playing these positions was less demanding mentally, and therefore would not provide a comparable opportunity for developing a general knowledge of the

game.

Therefore, it appears that there may be some relationship between position played in football and mobility to a head coaching position.

Of the 46 coaches who had played football, 30 held the position of captain of the team at least once while 35 had received at least one individual award as a player. Therefore there was a slight relationship between personal recognition and becoming a head coach.

In regard to their team's success while playing, 34 of the respondents indicated they played on teams winning more than one-half of their games whereas only five played on teams winning less than half. Being a member of at least one championship team was experienced by 37 coaches. Once again it appears that successful experiences as a player are somewhat related to attaining a head coach position.

The position of assistant football coach was considered part of the training data. Thirty-nine of the respondents had been an assistant coach, however 29 coaches were assistants for less than three years. Neither personal achievement nor team success seemed related in anyway to attaining the head coach position as only one coach received a personal award, only 28 assisted on teams winning more than half of their games, and just 19 were assistant coaches involved with championship teams.

It appears that assistant coaching experience is not related by participation or success to mobility to a head coaching position. What are the reasons for this? Part of the explanation for the lack of assistant coaching experience in general could be explained by

analyzing the ways a head coaching position is attained in high school. Junior high school teams are often headed by new staff members just out of college, therefore there has been little or no opportunity for him to have been an assistant. If the new staff member has considerable playing experience, he may assist for one year with the senior team, or on occasion may even become the head senior coach immediately. Certainly, if he exhibits great enthusiasm for the game or desires to be a head coach, his chances of attaining the position rather quickly are great. Once again limited assistant coaching experience is required.

An explanation for the limited amount of personal or team success as an assistant coach in comparison with their football playing experience is partially explained by the fact that there are few personal awards given to assistant coaches. If there are any awards for coaching, they usually go to head coaches of successful teams. Assistant coaches of successful teams often remain as assistant coaches and are happy to do so. Indeed, successful coaching units often stay together for many years. Conversely, more changes in coaching staffs occur in less successful situations. Therefore, an assistant coach in a school whose teams have been less successful is more likely to be given the head coaching opportunity. This provides partial explanation for the lack of relationship between assistant coaching success and upward mobility to head coach.

Data on the assigned responsibilities as an assistant coach with the team was collected. There was no relationship between a system coached (offense, defense, both) or general area coached (backs, line,

both) and achieving a head coaching position.

Within the sample, 48 coaches had coached an average of 3.58 other sports for a mean of 16.36 coaching experiences. At least one championship team had been coached by 34 of the respondents, with a mean of 2.98 championships. These results are not surprising considering the number of physical education teachers involved in the study. In addition, many of these coaching experiences have taken place during the respondent's head coaching tenure, therefore they are not related to becoming a head football coach, but could possibly be related to coaching improvement or success.

Data on experience and effectiveness as a head coach were obtained from each respondent. The average number of years of experience was 6.1, with a range of two to fourteen years indicated.

Individual coaching awards had been received by 13 of the coaches. Team success, a key variable in this study, was provided as win-loss data initially then converted to percentage of wins. Of the 50 coaches, seven indicated coaching records of less than 55 per cent wins. The median was 64.320 per cent and the range from 12 per cent to ninety-one per cent. For comparison purposes three success levels of coaches were established. Thirteen coach's teams won 75 per cent or more of their games, fifteen coach's teams won less than sixty per cent of their games, and the remaining 22 coached teams winning between 60 and 75 per cent.

Thirty-two of the respondents had coached at least one league championship team. Generally speaking, this sample was quite effective,

if winning 51 per cent of league games is considered successful. One possible reason for this high rate of success is that, as explained earlier, few coaches remain in coaching if their teams are consistently unsuccessful. Indeed, some coaches may leave when their teams are successful on a percentage basis, but fail to win championships. Therefore it would appear that the kind of football coach that tends to remain coaching is the one whose teams are usually competitive and occasionally challenge for the championship.

On the practice field, twenty-seven of the respondents coached the offense, three coached the defense, and twenty coached both. In regards to positions coached, twenty-five were back coaches, nine were line coaches, and sixteen coached both. Therefore the majority of the coaches were coaching the offensive system and backfielders in practice. Of course, this is to be expected because of their own playing experience. In addition, because of the coordinated effort required and great number of plays involved, more practice time was usually provided for offensive practice. Hence, the head coach often accepted the responsibility for planning and organizing the offense.

Of the fifty coaches interviewed, nine did not coach the previous year. Six respondents indicated that time was the key factor in their decision, two reported that their priorities had changed, and one had been transferred to a school where there was already a head coach. Four of these coaches remained in contact with football last year, three of them as an assistant coach, and one as an official.

Information on time spent per week during the football season was obtained from each coach. In hours of actual practice time, twenty

coaches practiced more than nine hours, twenty-seven practiced between six and nine hours, and one coach practiced less than six hours. In hours of other than practice time, four coaches reported spending more than 30 hours, twelve coaches indicated they spent from fifteen to thirty hours, twenty-five spent from 8 to 15 hours, and nine reported spending less than nine hours.

The average number of practice time hours was 8.82 with the 17.64 hours on the average, spent out of practice. Therefore the combined means indicate that on the average time spent on football during the season was 26.46 hours per week.

The coaches self rating scale indicated coach perception of his effectiveness on several criteria (see Appendix). Generally coaches saw themselves most efficient in maintaining coaching staff harmony, and least effective during actual games involving their team. It is interesting to note the perceived lack of effectiveness during games. Football, because of the huddle break between plays, involves a great amount of planning and instant decision making during the actual game. The emphasis on quick and proper decisions is greater in close games. The ability of the coach to make these decisions quickly and wisely is probably related to actual practice in making these decisions. This practice can occur by trial and error during actual games or be a planned part of team practices or meetings. Perhaps not enough attention has been given to this important coaching skill.

Individual item scores of the coach self rating scale were grouped three ways to provide a task-oriented index, a social-emotional oriented index, and a total score index. These coaches saw themselves slightly

more effective on social-emotional oriented skills than on task-oriented skills with the range of perceptions being greater on social-emotional oriented skills. The total score index had a mean of 21.060 which indicated an average assessment by coaches of "satisfied" on all effectiveness criteria. The range, however, was from thirteen (very satisfied) to forty-one (dissatisfied) indicating a wide variance of perceived effectiveness among coaches.

The coach improvement scale (see Appendix) was also analyzed by individual score items and grouped scores. Of the individual score items, the two methods of improvement assessed by coaches generally as being the most helpful were "experience gained during our games" and "just thinking about football, my team, and how to improve what I'm doing." In contrast the items thought as being least helpful were "watching football shows on T.V. other than games","reading books on general psychology", and "reading magazines or periodicals about sport in general, including football". The mean score per item among the coaches was 3.15 or a "helps to some degree" average rating. The range of scores was quite diverse (67.144) indicating an average response of "very helpful" to "little help" on all items. That is, some coaches felt that almost all methods helped them improve, while others felt that very few items, if any, helped them improve.

By grouping individual coach improvement items according to similarity of method used to improve a further general analysis was attempted. These groupings included emphasis on talking, watching, reading, research, psychology, "own team", television, and "professional or

American college football".

Rated similarly and in the lowest category in terms of help, were groupings emphasizing television and professional or American college football. Conversely, one method noted above all others as being most helpful was the "own team" grouping. This grouping involved six items, three of which were improvements gained while actually observing the team in action. The other three were improvements involving talking with the team's coaches or players, or just thinking about the team. This emphasis on improvements brought about by his own team is not surprising. Due to the complexity of the game, the number of team members and coaches involved, the short but intense season, and the flexibility allowed each coach in terms of skills and systems to teach, it is understandable that coaches learn most by their extreme involvement with their own team.

All respondents were given an opportunity to describe any methods used for improvement not included in the scale. Forty of the coaches could not think of any other methods used by them, while ten coaches provided additional items. These included: guest coaching at a Canadian Football League training camp; experience gained as a police officer dealing with people in emotional situations; talking with parents, teachers, or other students about our players; emulation of significant others whether they are coaches or not; and thinking about experiences or coaches they had as a player. These comments not only provided a more complete understanding of the sample in terms of methods

used to improve coaching, but should be incorporated in this scale for future studies of this nature.

The Least Preferred Coworker (LPC) Scale developed by Fiedler was used as a measure of leadership style in this study. In terms of average item scores, the mean for this sample was 4.06, which was within the range of 3.19 to 4.13 expected (Fiedler, 1967, p. 44). However, the range of average individual item scores was higher than expected, that is, from 1.75 to 7.06. Four of the respondents scored very high in comparison with most other samples. When the coaches were grouped according to low and high LPC scores as suggested by Fiedler (1967, p. 44), only three fell into the low LPC category, while 28 coaches were considered to have high LPC scores. Another nineteen coaches had scores in the mid-range area.

As indicated earlier, the low LPC score indicates the degree to which an individual is ready to reject completely those with which he cannot work.

> A highly rejecting description indicates a very strong emotional reaction and not merely the calm and reasoned judgment of a detached observer. A more positive score indicates a willingness to perceive even the worst co-worker as having some reasonably positive attributes and again reflects more than a simple objective judgment. The high LPC person who sees both good and bad points in his least preferred coworker takes a much more analytical point of view which suggests a greater concern with knowing even those with whom he cannot work (Fiedler and Chemers, 1974, p.74).

This sample group of educator football coaches tended to have higher LPC scores than other sample groups studied. The fact that they are school teachers and coaches would seem to provide some explanation for

the higher scores considering the characteristics of high LPC persons delineated above. Certainly it could be said that most people interested in teaching and coaching look forward to a career which allows abundant opportunity for relating with other people in addition to the technical requirements of the job. Therefore, it would seem logical that those people entering the field of teaching and coaching may be human relations oriented and therefore view their least preferred co-worker more positively.

Another interpretation of the higher LPC scores obtained here could be that because of their teaching and coaching experience, the respondents' judgment of people has become more positive, therefore their leadership style has changed to being more person-oriented. However as indicated earlier, Fiedler found the LPC score to be stable over time, therefore the previous explanation seems more plausible at this time.

Each respondent provided data on coach-team relations by completing the Group Atmosphere (GA) Scale. Their scores were interpreted as the degree to which each coach felt accepted by his team, thereby allowing him to function at ease in his role as leader (Fiedler, 1967). Posthuma (1970) analyzed the GA scores for 2,415 subjects and found the median score for real-life groups to be 64.9 on an eighty point scale. The sample used for this study had a mean score of 68.4 with a range from forty-one to eighty, slightly higher than expected.

Although not significantly higher, the trend of the GA scores in this direction might be explained in terms of the respondents' voca-

tions, that of school teachers and football coaches. If we could assume that these individuals are aware of their human relations role, then it may also be true that they will work hard at fulfilling this role. If this is the case, then we could expect that teachers or coaches would take pride in establishing a good relationship with their class or team. Thus, slightly higher scores on the GA scale would be expected, in lieu of their expectation to establish a positive relationship with their group.

Another factor that could affect coach-team relations in football are the great demands physically, mentally and emotionally placed on coaches and players during the season. Because of these pressures, and the high amount of interaction that takes place within a football team over a relatively short period of time, personal relationships and team unity may develop more quickly than in most groups. As a result, more opportunities for developing better relationships with the team are provided for the coach. Perhaps these factors contribute to the slightly higher GA scores for this sample.

Another measure of coaching style or attitude included in the study was the respondent's score on the Coach Attitude Behavior (CAB) Scale developed by Bain (1973) "based upon examples of what has been termed 'Authoritarian' coaching behavior and attitudes" (p. 80). Total scores were computed with negative or positive totals indicating the degree of agreement or disagreement with items positively stating an authoritarian attitude. The mean score of -15 indicated a general but slight disagreement by football coaches, indicating a slightly non-

authoritarian attitude or behavior. The range of scores from -55 or "on the whole disagreement" with the statements, and +30 or "slight agreement" with the statements, included forty coaches with negative scores, two coaches with scores of zero, and eight coaches with positive scores. These findings appear to be consistent with Bain's (1974), which indicated that coaches were less authoritarian than two sample groups including educators and members of the general male population. Certainly it could be stated that football coaches as a group tended not to be authoritarian as measured by this scale.

These investigations provide scientific evidence that would indicate coaches in general, particularly football coaches in this study, have been somewhat incorrectly labelled as authoritarian figures. An important consideration here is that most of the sports literature critical of authoritarian coaches was not scientifically analyzed and further was based on professional or college situations in the United States. These are factors that would make it illogical to assume that Alberta amateur football coaches are similar to those criticized in the literature.

The greatest difference in these coaching situations, discounting any societal differences, is the financial factor. It would be difficult to measure the effect on all aspects of the sport, that scholarships and huge salaries cause. Certainly an exaggerated emphasis on winning and coach insecurity seem to be two effects of this situation. In addition, the trememdous stress and pressure associated with this coaching situation cannot help but affect the attitudes and

behaviors of the coaches involved. Therefore it could be expected that extreme actions or behaviors such as those described in the literature may occur at times. These probably have been caused by the pressures surrounding the situation, as much as being an inherent characteristic of the coach.

Undoubtedly the coaches studied here do not have these same pressures. Perhaps this puts them in a easier position to keep their role in perspective and thus take more advantage of the contributions that assistant coaches and players can make. If these contributions are well coordinated, this approach may not only result in good performance on the field, but could lead to a harmonious team atmosphere. The increased interest by athletes in developing a better understanding of their sports and in protecting their own welfare seems to provide further support for a generally non-authoritarian approach. Of course, the coach's personality structure, his experience in coaching, and his general level of confidence in his own and other's abilities will determine the degree to which he might use this approach. However the only real pressures to be successful will be those imposed internally by the team or the coach himself.

Coaching Effectiveness Correlates

Two measures of coaching effectiveness including percentage of league games won and number of league championships won were related to the various determinants of coach training; namely coach experience, coach leadership style, coach-team member relations, and coaches perceived effectiveness. It was assumed that these two effectiveness

measures were highly related because of the tendency of teams winning most of their games to win the league championship also. However, as most leagues have a playoff structure involving the top teams in the league, then the opportunity exists for teams with a lower percentage of league wins in any one year to win the championship. Conceptually, most coaches would rate having their team win the league championship higher than having their team achieve the highest percentage of wins but lose the championship. Perhaps there may be subtle but significant differences between the coaches of these teams that can be measured.

In relating both measures of effectiveness to all possible variables, Pearson Product Moment Correlation Coefficients were computed. Coach effectiveness using either measure was not significantly related to coach training as measured by total years of teaching, years of teaching physical education, years of football playing experience, years of assistant coaching in football, seasons of coaching other sports, hours spent on the practice field, and most measures of coach improvement.

Two relationships tested significantly for each of the effectiveness measures as shown in Table I, however, they were different variables for each.

None of the experiences prior to becoming a head coach were related to coaching effectiveness in terms of percentage of games won. Two tests with the Coach Improvement Scale were accepted at the .05

level of significance. These were negative relationships with the correlations being quite low. The negative relationships indicate that the lower the score on the Coach Improvement Scale, the greater the degree to which the coach uses the improvement method. The relationships were established with the total score on the scale, and the index from the scale emphasizing the use of research materials to improve coaching methods. Thus there were somewhat positive relationships established between coaching effectiveness as measured by percentage of games won and general use of coaching improvement methods, also the specific use of research information.

TABLE 1

PEARSON PRODUCT MOMENT CORRELATION COEFFICIENTS
BETWEEN MEASURES OF COACHING EFFECTIVENESS AND TRAINING

Percentage of Games Won	*Coach Improvement Scale	(Total Score)	-.2356*
Percentage of Games Won	*Coach Improvement Scale	(Research Index)	-.2091*
Championships Won	*Years Playing Experience Beyond H.S.		-.2681*
Championships Won	*Preparation Time in Hours per week		-.3546**

* Significant at the .05 level
** Significant at the .01 level

It certainly seems logical that the more effective coaches would be making more efforts to improve generally. Although the use of research information is more difficult to interpret, it is suggested that this

method of improvement may be used by more experienced coaches than less experienced coaches who have little time to read research with having to contend with their first year of teaching and coaching. In addition, the more experienced coach is more likely to have obtained an extra degree over the years thus acquainting himself with the research material. This explanation is only possible because of the positive relationships found between coaching experience and effectiveness in this study.

The significant relationships found between success as measured by number of league championships won were those correlated with years playing experience beyond high school and preparation time in hours per week, the last of these being the most significant of all the training criteria. The interpretation of these findings becomes difficult when attempting to differentiate between the two measures of effectiveness used. Why weren't similar relationships discovered between these variables and effectiveness as measured by percentage of games won? It would appear that higher level playing experience and more preparation time are related only to winning championships. Although the level of significance in regards to preparation time may be not as high as indicated because of the conversion of straight hours into four periods of time spent, it was felt that some relationships existed but their interpretation should be treated with caution.

The few slight relationships found here would tend to support Fiedler's interpretation of leader training and effectiveness. That is, leader training affects the favorability of the situation for the

leader rather than his effectiveness. Then, depending on the leader motivational style, he will be more or less effective (Fiedler and Chemers, 1974). Some coaches, therefore, would show greater effectiveness with training while others may be even less effective. This study has extended Fiedler's definition of training to include technical and associated leadership experiences like football playing and teaching. Basically, the results have been insignificant and thus consistent with those expected with any training experience.

Data on years of coaching experience was correlated with both measures of effectiveness with somewhat positively related results as shown in Table II.

TABLE II

PEARSON PRODUCT MOMENT CORRELATION COEFFICIENTS BETWEEN MEASURES OF COACHING EFFECTIVENESS AND EXPERIENCE

Percentage of Games Won	*Years of Coaching Experience	.2848*
Championships Won	*Years of Coaching Experience	.3435**

* Significant at the .05 level

** Significant at the .01 level

The positive relationships shown here using both measures of effectiveness appear to provide some support for the coach being increasingly effective with more experience. It would be expected, however, that in regards to championships won, the longer the tenure in coaching, the more championship possibilities. Certainly this is true, and likely explains the high

level of significance indicated. Nevertheless, it was felt that some support for the relationship between experience and effectiveness was shown.

These relationships though not highly significant are in contrast to the research results found by Fiedler. Similar to his tests regarding training, his findings on the relationship between experience and effectiveness were also insignificant. The same reasoning in terms of relating training to Fiedler's contingency model applies here. That is, no consistent relationship should be shown between experience and effectiveness. Because of the low level of significance it was felt that situational factors such as player personnel and effect of assistant coaches were contributing factors also. However, due to the complex technical aspects of the game it usually takes a coach several seasons to develop the kind of understanding where he is able to handle these and other important social-emotional aspects of coaching as well. Perhaps the ability of the football coach as a leader can not be fully evaluated until he has acquired the necessary technical knowledge of the game. Then he may give his attention to the many important aspects of the coaching role. If this is the case then coaching experience would be related to effectiveness in that a certain amount of experience is needed to truly "coach" the team. After this experience has been gained then perhaps the coach's intelligence or cognitive complexity may determine his ability to take advantage of further experience, as reported in recent literature (Csoka, 1972; and Garland, 1975).

Pearson Product Moment Correlation Coefficients were used to compute the relationship between the two measures of leader effectiveness

and two measures of leadership style obtained in this study, those of leader motivational style as measured by the LPC scale and coach authoritarianism measured by the CAB scale. There were no relationships approaching significance.

With regards to correlations with the LPC score, relationships were not expected because of the uncontrolled situation favorability as defined by Fiedler (1967). Once defined, individuals with low LPC scores tend to be most effective in situations of extremely favorable or unfavorable situations, while individuals with high LPC scores would be most successful in situations of medium favorability. In the only reported study on coaches of sports teams, Danielson (1974), using limited controls on the situation favorability, found significant relationships between LPC and team effectiveness. However his findings were contrary to Fiedler's in that the individuals with low LPC scores were most effective in situations of medium favorability and vice versa.

Authoritarian coach attitude or behavior as measured by the CAB scale was found unrelated to coach effectiveness. There certainly was no reason to expect a relationship, but because of the lack of actual research done on coaches of football teams in this regard, a measurement was taken. Further investigation of the CAB scale is necessary to determine it's relationship to coaching effectiveness.

The measurements of effectiveness were correlated using the same technique with coaches scores on coach-team relation as measured by the Group Atmosphere Scale (See Table III).

TABLE III

PEARSON PRODUCT MOMENT CORRELATION COEFFICIENTS
BETWEEN MEASURES OF COACHING EFFECTIVENESS
AND COACH-TEAM RELATIONS

Percentage of Games Won	*Coach-Team Relations	.5171**
Championships Won	*Coach-Team Relations	.2386*

* Significant at the .05 level

** Significant at the .01 level

Considering that the percentage of games won is probably the most accurate measurement of effectiveness, it is interesting to note the higher level of significance recorded in comparison with other relationships measured to this point. It was decided to apply a stronger test to validate these findings. A standard one-way analysis of variance was used to test the relationship between means on GA scores when coaches were divided into three groups depending on percentage of games won. The results indicated a significant difference between means of .028 as indicated in Table IV.

TABLE IV

ONE-WAY ANALYSIS OF VARIANCE BETWEEN MEANS OF
GA SCORES AND COACHING EFFECTIVENESS LEVELS

Source	D.F.	S.S.	M.S.	F Ratio
Between Groups	2	386.5625	193.2813	3.827*
Within Groups	47	2373.5000	50.5000	
Total	49	2760.0625		

* Significant at .05 level

The Duncan Multiple Range Test was used to determine the significance of the differences between means as shown in Table V.

TABLE V

DUNCAN MULTIPLE RANGE TEST TO DIFFERENTIATE MEANS OF GA SCORES

Subset 1		
Group Mean	Group 3 - 64.533	Group 2 - 69.000
Subset 2		
Group Mean	Group 2 - 69.000	Group 1 - 71.8461

It was found that means involving the most effective coaches and the least effective coaches were statistically different from one another.

As a result of these tests, it could be stated that there is a definite relationship between coaches' scores on the GA Scale and effectiveness as measured by percentage of games won. In fact, more effective coaches scored significantly higher than less effective coaches.

The interpretation of these results should be made in light of attempts to understand what the GA Scale measures. The coach rated the degree to which the atmosphere of his team was positive or negative in past years of coaching. This was an indication of leader-member relations which was an important variable in determining the favorability of the situation for the leader (Fiedler, 1967). In this study coaches who scored highest also had the most successful teams.

They felt very positively about the relationships that existed on their teams. Perhaps because their teams have been accomplishing their primary goal of winning, the coaches perceived all things going well within the team. This would clearly indicate the overall importance of winning in the eyes of these coaches.

But, what part does the coach play in affecting coach-team relations? Is it not possible that the more effective coach would promote better coach-team relations resulting in improved team performance? It is suggested that both of these views provide part of the explanation for the positive relationships cited.

Correlations between scores on the coach's self-rating of effectiveness scale and both measures of actual effectiveness were computed using the Pearson Product Moment technique. There were no significant correlations relating to technical knowledge of the game, teaching ability, organizational ability, interpersonal relations with team members, ability to select and position personnel, effectiveness in terms of team morale, effectiveness in utilizing the talents of assistant coaches, and effectiveness in terms of several individual task-oriented items. Significant negative relationships are reported in Table VI indicating that greater effectiveness is related to perceived higher ability on the criteria included. It is interesting to note that once again percentage of games won seemed to be the more definitive measurement, although only two tests reached other than a very cautionary significance level in terms of attempting to interpret the findings.

TABLE VI

PEARSON PRODUCT MOMENT CORRELATION COEFFICIENTS BETWEEN MEASURES OF COACHING EFFECTIVENESS AND THE COACH'S SELF RATING OF EFFECTIVENESS

Percentage of Games Won	*Motivational Ability	-.4087**
Percentage of Games Won	*Game Efficiency	-.2566*
Percentage of Games Won	*Making Football Enjoyable	-.2442*
Percentage of Games Won	*Social-Emotional Index	-.3393**
Percentage of Games Won	*Total Score Index	-.2536*

* Significant at .05 level

** Significant at .01 level

Positive self-rated ability appeared to somewhat relate to actual effectiveness in terms of game efficiency, making football an enjoyable experience for the players, and general rating on all items listed. More likely relationships were established with motivational ability and general ability in the social-emotional area. It appears that coaches who perceive themselves as doing a good job in the area of motivation and other general social-emotional criteria are actually more effective coaches. Once again the opposite may be true, that is, being successful may have caused the coach to feel he is doing a good job in these areas. However, many of the scale items were found unrelated to effectiveness. Therefore winning was not an indication of doing well in all aspects of coaching. As a result the first of these explanations may be more plausible.

The relatively high level of significance of the social-emotional index prompted a further one-way analysis of variance test to be administered comparing means on the index with levels of coaching success. Although not significant at the .05 level of significance, a .064 level was achieved and is reported here as being worthy of note.

Therefore it could be said that there is a positive trend between a coach's self-rating of effectiveness on social-emotional responsibilities (motivation, coach-team member relations, providing an enjoyable experience, team morale, and coaching staff harmony), and actual team performance.

Although there are obviously several situational factors uncontrolled in this study as is indicated by the generally low level of significance shown for most of the relationships, a few interesting probabilities have been cited. A summary of the findings in response to the major hypotheses of this study are as follows:

1. There were no highly significant relationships demonstrated between measures of coach effectiveness and various coach-training variables. The most promising indicator was amount of coach preparation time when correlated with number of championship's won.
2. Some relationship existed between both measures of coach effectiveness and coaching experience in total number of years.
3. There were no significant relationships between the measures of coach effectiveness and either coach motivational style as measured by the LPC scale or

degree of coach authoritarianism as measured by the CAB Scale.

4. A positive relationship was shown between coach effectiveness as measured by percentage of games won and coach-team relations as measured by the coache's score on the GA Scale. Some relationship was shown between coach effectiveness as measured by the number of championships won and coach-team relations.

5. The coach's score on the coach self-rating of effectiveness scale was somewhat related to actual team performance. Items showing the highest significance were the coaches self-rating of his ability to motivate and his general ability to carry out social-emotional aspects in relating to the team.

Coach Motivational Style Correlates

A secondary purpose of this study was to examine the LPC score in terms of it's possible relationship to other specific measures used in this study.

> The LPC score has now been correlated with innumerable tests and measures, and none has yielded consistent relations. It is obvious from this lack of findings that the LPC score taps a personality attribute which is not measured by the usual psychological tests. However, considering the high predictive power of the score in such complex and socially relevant interactions as leadership, there can be little doubt that we are dealing with a very important aspect of personality (Fiedler and Chemers, 1974, p. 99).

Other measures were selected which appeared to examine a coach's attitude or behavior in carrying out task-oriented or person-oriented tasks. No relationships were found when Pearson Product Moment Correlation Coefficients were computed between LPC score and time spent on football during the season, scores on the coach self-rating of effectiveness and scores on the CAB scale measuring coach authoritarianism. Several indices from the Coach Improvement Scale did show significant albeit low level relationships with LPC scores as indicated in Table VII.

TABLE VII

PEARSON PRODUCT MOMENT CORRELATION COEFFICIENTS BETWEEN LCP SCORE AND VARIOUS COACH IMPROVEMENT SCALE MEASUREMENTS

LPC Score	*	Watching Methods	.2361*
LPC Score	*	Reading Methods	.2531*
LPC Score	*	Information on Psychology	.2828*
LPC Score	*	Information on Television	.2415*
LPC Score	*	Information on Pro and U.S. College Football	.2393*
LPC Score	*	Total Coach Improvement Methods Score	.2704*

* Significant at .05 level

Any interpretation of these scores may well be challenged but there seems to be a somewhat logical explanation for these findings. The positive relationship indicates that the lower the LPC score, the lower

the score on the coach improvement index and vice versa. This means that the low scoring LPC coach does more things to improve his coaching than the high scoring LPC coach does. Low LPC score has been interpreted as defining people who place task-oriented skills above person-oriented skills, therefore it is logical that these people as coaches would be very interested in improving their coaching as a means to accomplishing the task of winning games.

In conclusion it can be said that coach-motivational style was not highly related to any of the other measurements used in the study. Significance at a low level was found between coach motivational style and several coach improvement method indices.

Correlates of Coach Authoritarianism

In contrast to Bain's study on coaches of major sports at the high school level (1973), no relationships were found between scores on the CAB scale and age or years of head coaching experience of respondents. In addition no relationships were found with years of teaching experience, seasons coached in other sports besides football, and total football coaching experience. Pearson Product Moment Correlation Coefficients were used to treat this data.

Although relationships were not predicted it was felt that some validation of Bain's results might occur. The difference in results might have been due to the different sample groups tested in that his study included coaches from all sports.

In addition the investigation carried out here included coaches above the high school level.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The major purpose of this study was to analyze determinants of football coaching effectiveness as measured by team performance. Fifty amateur football coaches in the province of Alberta were personally interviewed and completed questionnaires providing information on their training, experience, leadership style, relations with their team, and self-rating of effectiveness. Correlations were computed between two measures of effectiveness including percentage of league games won and number of league championships won and the above listed determinants.

In addition, descriptive data provided information on the sample as a group, specifically delineating football coaches from other groups. The coaches studied were all teachers with their major academic background being in physical education. Ninety-two percent of the coaches had played football with the positions of quarterback, running back, and end being over-represented in the group. In general, assistant football coaching experience was not an important prerequisite. An average of 6.1 years as head football coach was reported with the mean percentage of wins in league play being 64.32. An average of about 25 hours a week during the season was spent on football.

A secondary problem investigated was the relationship between a coach's motivational style, as conceptualized by Fiedler, and other

variables used in this study. No consistent relationship between this concept as measured by the Least Preferred Coworker (LPC) Scale and other behavioral or personality measurements had been shown previously.

Finally, an effort was made to measure the relative authoritarianism of football coaches through the use of the Coach Attitude Behavior (CAB) Scale developed in an earlier study. Several relationships were examined between the coache's score on this scale and other variables.

Conclusions

1. There were no significantly high relations reported between measures of coaching effectiveness and coach training data.
2. Both measures of effectiveness were moderately related to years of head coaching experience.
3. Neither leadership style or degree of authoritarianism were significantly related to coaching effectiveness.
4. Coach-team relations as measured by the Group Atomoshere Scale were found positively related to percentage of league games won. It was suggested that both the effects of winning on the coach and the effects of the coach on coach-team relations were contributing factors.

5. Some relationship was shown between the coach's self-rating of his own effectiveness on social-emotional aspects with the team and percentage of games actually won.
6. No significantly high relationships were found between LPC score and other behavioral or attitude measures used in this study. However, association was indicated between LPC score and several indices from the Coach Improvement Scale.
7. Football coaches as a group tended not to be authoritarian as measured by the Coach Attitude Behavior Scale. No relationship was found between degree of authoritarianism and age, teaching experience, or coaching experience.

Implications

An effort was made to apply some concepts of current leadership effectiveness theory to sports team situations, in particular coaches of football teams. Findings in this study provided general support for continued study of these concepts as results were in the direction expected. Indeed, Fiedler's model of leadership effectiveness seems to include most of the basic ingredients for leadership study. Although not explored in this study, the favorability continuum as developed may be limited for sports team research, but flexibility has been shown with the recent interpretation of training and experience. It may be possible that situations unique to the coaching

of sports teams could be described along this continuum as well. Certainly situation variables such as the size of the team, the length of the season, the contribution of other team leaders including assistant coaches, and the ability of the coach to make effective decisions requiring both long range planning for the season and immediate judgements during a game are but a few to be considered.

A number of investigations have reported that football coaches in general are not the authoritarian figures publicized in recent non-scientific literature. Furthermore, there seems to be little necessity for this type of leadership style for it is not necessarily related to team performance anyway. It is suggested that the parents of young prospective football players should be made more aware of these findings. As indicated in the body of this thesis, the lack of external pressures on Canadian amateur coaches may indeed effect coaching styles. In addition, fledgling coaches who may be prone to adopting the authoritarian style for reasons of insecurity or emulation, should be discouraged from doing so. In fact, if results from this study are an indication, then human relations considerations are paramount to coaching success.

In lieu of the information from this study, what considerations seem appropriate for the improved structuring of training experiences for prospective coaches? It is suggested that although training criteria used in this study were for the most part unrelated to coach effectiveness, it may be a reflection on the quality and quantity of training that has caused this. Certainly this is not intended as

a criticism of all training experiences because many of these have been very beneficial. However, due to the plethora of uncoordinated technical but lack of human relations materials that has been presented at coaches clinics, courses, and in available readings, the very limited overall concept of the game developed as players, and the general lack of assistant coaching experience, it is understandable that training experiences have not been extremely beneficial.

Although there will be no end to the availability of football information, a coaches certification program recently initiated by the Canadian Amateur Football Association has outstanding potential for providing all levels of coaches with coordinated material on the subject. This program, in combination with a general theory program innovated by the Coaching Association of Canada, provides excellent progressive materials on technical and human relations aspects. These materials are provided in clinic form through provincial associations and encouragingly enough are being adopted by many universities for their football courses. Those completing the requirements of certification receive certificates to that effect from provincial and/or national sports governing bodies.

Organized football playing experience is usually characterized by extreme specialization at an early age. The position played may well remain constant for all the years of football. If this is the case, then the general understanding of the game as a player will be limited by this position. Some positions provide better opportunities to develop this than others. It is suggested that if at lower levels

of football, a compulsory rotation of positions be carried out as in some minor hockey leagues, players would not only develop a better overall appreciation for the game, but would probably perform better at specialized positions later on. This also has implications for the development of very simple but sound offenses and defenses at the beginning levels.

A further suggestion has to do with the provision of more coaching practice before the acquisition of head coaching positions. Assistant coaching in football is structured to provide a mini-head coaching experience in that most assistant coaches are given control over their own group. Therefore this kind of experience should provide an excellent progression for head coaching. Unfortunately, circumstances beyond the control of the prospective coach have often moved him quickly into a head coaching position. To partially alleviate this problem it is suggested that more encouragement be given to prospective coaches to obtain assistant coaching experience, and that whenever possible, institutions or associations promoting football provide practice opportunities in actual coaching.

Recommendations

The following recommendations for further study are based on the results of this investigation and the evident lack of research concerning coaching effectiveness.

1. Further study should be carried out on football coaches using Fiedler's complete model with situation modifications incorporated to account for unique features including

the leadership network involved, the number of team members, and the length of season.

2. Similar research on non-teacher coaches is necessary so that further generalizations may be made.
3. To determine different societal or situational factors, corresponding studies done in other Canadian provinces or in the United States are indicated.
4. Owing to the number of potentially influential leaders on a football team including assistant coaches and team representatives, an analysis of this leadership network as it relates to team performance is necessary.
5. An investigation of leadership effectiveness at higher level college and professional football is needed particularly as it relates to training, experience, and coach leadership style.
6. The leadership effectiveness involving different sport coaches should be studied so that comparisons and generalizations can be attempted.

BIBLIOGRAPHY

Bain, Robert D. "Authoritarian Measures in Canadian Coaches." Unpublished Master's thesis, University of Alberta, 1973.

Chemers, M.M., Rice, R.W., Sundstrom, E., and Butler, W.M. "Leader LPC, training, and effectiveness: An experimental examination." Unpublished Paper presented to the Southern Illinois University Leadership Symposium, 1973.

Csoke, Louis S., and Fiedler, Fred E. "Leadership and Intelligence: A Contingency Model Analysis." Proceedings of the Annual Convention of the American Psychological Association. V11 (1972), 439-440.

Danielson, Richard R. "Leadership in Coaching: Description and Evaluation." Unpublished Ph.D. dissertation, University of Alberta, 1974.

Dunnette, M., and Campbell, J. "Laboratory Education: Impact on people and organizations," Industrial Relations, V11 (1963), 127.

Edwards, Harry. Sociology of Sport. Homewood, Illinois:Dorsey Press, 1973.

Fiedler, Fred E. A Theory of Leadership Effectiveness. New York: McGraw-Hill Inc., 1967.

_____. "Assumed similarity measures as predictors of team effectiveness," Journal of Abnormal and Social Psychology, XL1X (1954), 381-388.

_____. "A Method of Objective Quantification of certain Countertransference Attitudes," Journal of Clinical Psychology, V11 (1951), 101-107.

_____. "The Leaders Psychological Distance and Group Effectiveness." Group Dynamics. Edited by D. Cartwright and A. Zander. Evanston, Illinois: Row, Peterson and Company, 1960.

_____. "Personality, Motivational Systems, and Behavior of High and Low LPC Persons," Human Relations, XXV (1972), 391-412.

_____. "Style or Circumstance: The Leadership Enigma, Psychology Today, 11 (1969), 38-43.

_____. "Validation and Extension of the Contingency Model of Leadership Effectiveness: A Review of Empirical Findings," Psychological Bulletin, LXXVI (1971), 128-48.

_____. "Leader Attitudes, Group Climate, and Group Creativity," Journal of Abnormal and Social Psychology, LXV (1962), 308-318.

_____. "Leadership Experience and Leader Performance - Another Hypothesis Shot to Hell," Organizational Behavior and Human Performance, V (1970), 1-14.

Fiedler, Fred E. and Chemers, Martin M. Leadership and Effective Management. Glenview, Illinois: Scott, Foresman and Company, 1974.

Fishbein M., Landy, E. and Hatch, G. "Some Determinants of an Individual's Esteem For His Least Preferred Co-worker," Human Relations, XXII (1968), 173-189.

_____. "Consideration of two assumptions underlying Fiedler's Contingency Model for the prediction of leadership effectiveness," American Journal of Psychology, IV (1969), 457-473.

Foa, U.G., Mitchell, T.R. and Fiedler, F.E. "Differentiation matching," Behavioral Science, XVI (1971), 130-142.

Garland, P. "The LPC Scale as a measure of Cognitive Style and Motivation." Unpublished paper presented at the Annual Conference of the Canadian Association for the Study of Education Administration, University of Alberta, 1975.

Gibb, C.A. Leadership. Middlesex, England: Penguin Books Inc., 1969.

Graubard, Stephen and Holton, Gerald. Excellence and Leadership in a Democracy. New York: Columbia University Press, 1962.

Grusky, Oscar. "The Effects of Formal Structure on Managerial Recruitment: A Study of Baseball Organization," Sociometry, XXVI (1963), 345-353.

Hendry, L.B. "A Personality Study of Highly Successful and Ideal Coaches," Research Quarterly, XL (1969), 299-304.

House, R.J. "T-group education and leadership effectiveness: A review of the empirical literature and a critical evaluation," Personnel Psychology, XX (1967), 1-32.

Luschen, G. "Small group research and the group in sport." Sociology of Sport. Edited by Gerald S. Kenyon. Chicago, Illinois: Athletic Institute, 1969.

Meggysey, D. Out of Their League. New York: Paperback Library, 1971.

Mitchell, T.R. "Leader complexity and leadership style," Journal of Personality and Social Psychology, XVI (1970), 166-173.

Myers, A.E. and Fiedler, F.E. "Theorie und Probleme der Fuhrung (Theory and problem of leadership)." Kleingruppenforschung and Gruppe im Sport. Edited by G. Luschen. Koln, Westdeutscher Verlag, 1966.

Percival, L. "The Coach from the Athlete's Viewpoint." Proceedings: Art and Science of Coaching Symposium. Toronto, 1971.

Posthuma, A.B. Normative Data on the Least Preferred Co-Worker Scale (LPC) and the Group Atmosphere Questionnaire (GA). Organizational Research, University of Washington, 1970.

Riesman, D. and Denny, R. "Football in America: A Study of Cultural Diffusion," American Quarterly, 111 (1951), 309-319.

Scott, J. The Athletic Revolution. New York: Dell Publishing Co., 1972.

Shaw, G. Meat on the Hoof. New York: Dell Publishing Co., 1972.

Shaw, Marvin E. and Costanzo, Philip R. Theories of Social Psychology. New York: McGraw-Hill, 1970.

Sherif, M. and Sherif, C. An Outline of Social Psychology. New York: Harper, 1963.

Singer, Robert N. Myths and Truths in Sports Psychology. New York: Harper and Row, 1975.

Stogdill, Ralph M. Handbook of Leadership. New York: Collier-MacMillan Canada Ltd., 1974.

_____. "Leadership, membership and organization," Psychological Bulletin, XLVII (1950), 1-14.

Tutko, T.A. and Richards, J.W. Psychology of Coaching. Boston: Allyn and Bacon, 1971.

Widmann, R.H. "A Study of the Relationship Between Perceptual Accuracy and Coaching Effectiveness." Unpublished Ph.D. dissertation, Florida State University, 1969.

APPENDIX

COACH QUESTIONNAIRE

Coach Questionnaire

PART A - PERSONAL DATA

1. AGE IN YEARS _____

2. MARITAL STATUS: Category and Number of Years if Applicable

SINGLE ____

MARRIED ____

DIVORCED or SEPARATED _____

WIDOWER _____

3. DEPENDENTS: _____

4. RELIGIOUS DENOMINATION: _____

5. CHURCH ATTENDANCE:

Once per week

Once per month

Less than once per month, but more than once per year

Once per year

Less than once per year

Never

PART B - TRAINING DATA

1. DIPLOMAS AND DEGREES HELD IF ANY:

Degree or Diploma	Specialization if any	Institution and city	Year Degree or Diploma Granted

2. Do you have school teaching experience? _____

If so, type of teaching certificate held.

_____

3. Do you have experience in teaching physical education? _____

If so, number of years experience. _____

4. Football playing experience if any:

Level	Number of Years	Position Played Most	Awards - Captain	Winning Years or League Champions
Pre High School				
High School Junior				
High School Senior				
Junior or College				
University				
Professional				
Other				
TOTALS				

5. Football Assistant Coaching Experience if any:

Level	Number of Years	Major Coaching Responsibility	Coaching Awards	Winning Years League Champions
Pre High School				
High School Junior				
High School Senior				
Other				
Post High School				
TOTALS				

6. Other coaching experience if any:

Sport	Level	Number of Years	Winning Years League Champions
TOTALS			

7. How much time did you spend on coaching football during the season?

Total time spent in practice not including preparation time time in hours per week. _____

Total time spent in preparing for practices and games in hours per week. _____

PART C - EXPERIENCE DATA

1. Football head coaching experience involving at least two of the last five years.

Level	Number of Years	Other Coaching Responsibility	Coaching Awards	Win-Lost Records League Champions
Pre High School				
High School Junior				
High School Senior				
Other				
Post High School				
TOTALS				

2. Were you a head football coach last year? _____

If so, which level did you coach? _____

If not, what is the reason? _____

PART D - INSTRUMENTS

1. Coach Self Rating Scale

How would you rate your ability or effectiveness as a head coach in the following categories? Please circle your response using the following scale.

1- Very Satisfied 2- Satisfied 3- Unsure
4- Dissatisfied 5- Very Dissatisfied

Technical knowledge of the game. 1 2 3 4 5

Teaching ability. 1 2 3 4 5

Organizational ability. 1 2 3 4 5

Ability to Motivate. 1 2 3 4 5

Interpersonal relations with individual team members. 1 2 3 4 5

Ability to select and position personnel. 1 2 3 4 5

Effectiveness in terms of team's performance during games. 1 2 3 4 5

Effectiveness in terms of making football an enjoyable experience for your players. 1 2 3 4 5

Effectiveness in terms of team morale. 1 2 3 4 5

Effectiveness in utilizing talents of assistant coaches. 1 2 3 4 5

Effectiveness in maintaining harmony on the coaching staff. 1 2 3 4 5

2. Coach Improvement Scale

Your coaching abilities are improved from season to season in a number of ways. We are interested in what you do personally that in your opinion helps you improve most. Please circle the appropriate number in each case. If you feel you cannot respond to any question, just leave it blank. If you have never or very seldom done the particular thing in any item, please circle "5" for "No Help".

REMEMBER: INDICATE WHAT HAS ACTUALLY HELPED YOU IMPROVE, NOT WHAT YOU THINK SHOULD OR MIGHT HELP.

1- Extremely Helpful 2- Very Helpful 3- Helps some
4- Little Help 5- No Help

1. Experience gained during our practices. 1 2 3 4 5
2. Experience gained during our games. 1 2 3 4 5
3. Talking with football coaches on our team. 1 2 3 4 5
4. Talking with football coaches on other teams. 1 2 3 4 5
5. Talking to coaches in other sports. 1 2 3 4 5
6. Talking to our players or ex-players. 1 2 3 4 5
7. Watching other amateur teams play, live. 1 2 3 4 5
8. Watching C.F.L. games, live. 1 2 3 4 5
9. Watching other teams practice football. 1 2 3 4 5
10. Watching teams play other sports. 1 2 3 4 5
11. Watching CFL games on T.V. 1 2 3 4 5
12. Watching American NFL or WFL on T.V. 1 2 3 4 5
13. Watching American college football on T.V. 1 2 3 4 5
14. Watching Canadian amateur football on T.V. 1 2 3 4 5
15. Watching football coaching shows on T.V. 1 2 3 4 5
16. Watching football shows on T.S. other than games (eg. weekly hi-lites, special features about football). 1 2 3 4 5
17. Watching instructional football films or tapes. 1 2 3 4 5

RECALL AGAIN: YOUR ANSWERS SHOULD INDICATE WHAT HAS ACTUALLY HELPED YOU IMPROVE, NOT WHAT YOU THINK SHOULD OR MIGHT HELP.

18. Watching game films or tapes involving our team. 1 2 3 4 5

19. Watching game films or tapes not involving our team. 1 2 3 4 5

20. Just thinking about football, my team and how to improve what I'm doing. 1 2 3 4 5

21. Attending football coaching clinic presentations. 1 2 3 4 5

22. Reading notes and papers from coaching clinics. 1 2 3 4 5

23. Reading football books about techniques and strategy. 1 2 3 4 5

24. Reading articles in magazines or periodicals about techniques and strategy. 1 2 3 4 5

25. Reading books written by pro football players or coaches about their experiences. 1 2 3 4 5

26. Reading football books about great coaches. 1 2 3 4 5

27. Reading books about the psychology of coaching. 1 2 3 4 5

28. Reading magazines or periodicals about the psychology of coaching. 1 2 3 4 5

29. Reading books on general psychology. 1 2 3 4 5

30. Reading magazines or periodicals on general psychology. 1 2 3 4 5

31. Reading magazines or periodicals about sport in general, including football. 1 2 3 4 5

32. Listening to talks by researchers or reading reports of research studies about:

    a. psychology of coaching 1 2 3 4 5
    b. physiology of exercise 1 2 3 4 5
    c. motor learning 1 2 3 4 5
    d. biomechanics or kinesiology 1 2 3 4 5
    e. training techniques 1 2 3 4 5

33. My experience as a teacher of physical education...if you teach physical education. 1 2 3 4 5

34. My experience coaching other sports. 1 2 3 4 5

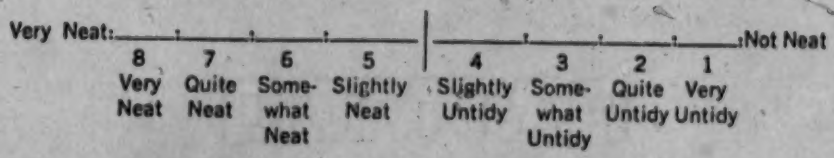
35. If you think you have gained improvement out of something not included in this list, please describe it in the space below:

Instructions for LPC and group atmosphere scores and sample scales

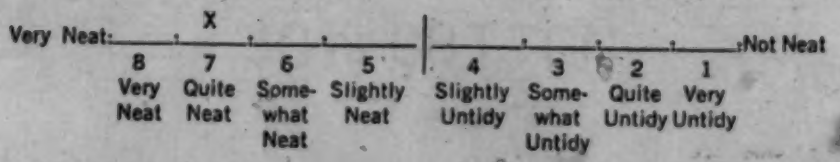
People differ in the ways they think about those with whom they work. This may be important in working with others. Please give your immediate, first reaction to the items on the following two pages.

On the following sheet are pairs of words which are opposite in meaning, such as Very Neat and Not Neat. You are asked to describe someone with whom you have worked by placing an "X" in one of the eight spaces on the line between the two words.

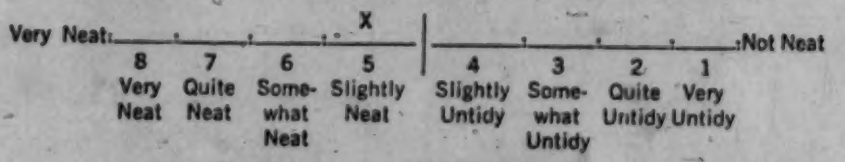
Each space represents how well the adjective fits the person you are describing, as if it were written:



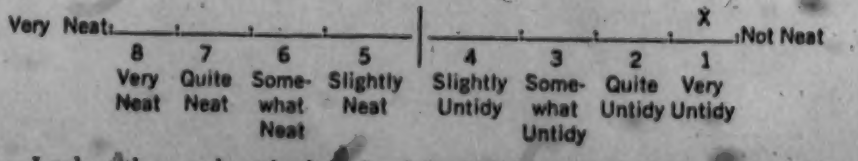
For example: If you were to describe the person with whom you are able to work least well, and you ordinarily think of him as being *quite neat*, you would put an "X" in the second space from the words Very Neat, like this:



If you ordinarily think of the person with whom you can work least well as being only *slightly neat*, you would put your "X" as follows:



If you would think of him as being *very untidy*, you would use the space nearest the words Not Neat.



Look at the words at both ends of the line before you put in your "X." Please remember that there are *no right or wrong answers.* Work rapidly; your first answer is likely to be the best. Please do not omit any items, and mark each item only once.

3. LEAST PREFERRED COWORKER (LPC) SCALE

Now, think of the person with whom you can work least well. He may be someone you work with now, or he may be someone you knew in the past.

He does not have to be the person you like least well, but should be the person with whom you had the most difficulty in getting a job done. Describe this person as he appears to you.

Pleasant	:	:	:	:	:	:	:	: Unpleasant
Friendly	:	:	:	:	:	:	:	: Unfriendly
Rejecting	:	:	:	:	:	:	:	: Accepting
Helpful	:	:	:	:	:	:	:	: Frustrating
Unenthusiastic	:	:	:	:	:	:	:	: Enthusiastic
Tense	:	:	:	:	:	:	:	: Relaxed
Distant	:	:	:	:	:	:	:	: Close
Cold	:	:	:	:	:	:	:	: Warm
Cooperative	:	:	:	:	:	:	:	: Uncooperative
Supportive	:	:	:	:	:	:	:	: Hostile
Boring	:	:	:	:	:	:	:	: Interesting
Quarrelsome	:	:	:	:	:	:	:	: Harmonious
Self-Assured	:	:	:	:	:	:	:	: Hesitant
Efficient	:	:	:	:	:	:	:	: Inefficient
Gloomy	:	:	:	:	:	:	:	: Cheerful
Open	:	:	:	:	:	:	:	: Guarded

4. GROUP ATMOSPHERE (GA) SCALE

Describe the atmosphere of your team by checking the following items.

		8	7	6	5	4	3	2	1	
1.	Friendly	:	:	:	:	:	:	:	:	Unfriendly
2.	Accepting	:	:	:	:	:	:	:	:	Rejecting
3.	Satisfying	:	:	:	:	:	:	:	:	Frustrating
4.	Enthusiastic	:	:	:	:	:	:	:	:	Unenthusiastic
5.	Productive	:	:	:	:	:	:	:	:	Nonproductive
6.	Warm	:	:	:	:	:	:	:	:	Cold
7.	Cooperative	:	:	:	:	:	:	:	:	Uncooperative
8.	Supportive	:	:	:	:	:	:	:	:	Hostile
9.	Interesting	:	:	:	:	:	:	:	:	Boring
10.	Sucessful	:	:	:	:	:	:	:	:	Unsuccessful

5. Coach Attitude Behavior (CAB) Scale

INSTRUCTIONS

The following statements are based upon situations and specific problems with which coaches sometimes must concern themselves. The best answer to each statement is your personal choice. I have tried to cover a wide variety of coaching questions. You may find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and perhaps uncertain about others; whether you agree or disagree with any statement, you can be sure that many coaches feel the same as you do. Please base your opinions upon your feelings and your actual behavior with respect to your coaching experiences.

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Write +1, +2, +3, or -1, -2, -3, depending on how you feel in each case.

+1	I agree a little	-1	I disagree a little
+2	I agree on the whole	-2	I disagree on the whole
+3	I agree very much	-3	I disagree very much

1. It is best to maintain a large social distance from the players in order to maintain a high level of authority.
2. Coaches should be concerned with discovering the individual athletes who violate team or social rules.
3. The players should always realize that coaches are the boss whether or not they are right and their decisions or regulations should never be questioned.
4. The coach has the right to set all rules and regulations and anyone who violates these rules must be disciplined.
5. The coach has enough problems trying to achieve a high performance level from his athletes and should not overly concern himself with and individual athlete's problems.

6. Players should report all grievances to the captain of the team in order that he may report them to the coach.

7. The best way to eliminate mistakes is to make the players do pushups, laps or any form of physical exercise so that he will remember his mistakes and won't make them again.

8. Most players are motivated by threats of punishment such as laps, pushups, etc.

9. Players are motivated by threats of demotion or of expulsion from the team.

10. Disciplinary action taken by the coach is easier and handled better if the players involved are not personally close to the coach.

11. Coaches should get to know their players slightly, but should not become friendly or warm with them.

12. Players should realize that the coach knows more than they do in the particular sport and should never ask "why?"

13. A well disciplined team on and off the playing field or court usually has better performance record.

14. A well disciplined team makes the coach look better to the community at large.

15. A rigid relationship with an athlete on and off the court should be one of the methods used by coaches to maintain respect and jurisdiction a coach deserves and needs in order to best perform his duties as coach.

16. A coach who is too friendly with his players and does not remain somewhat detached from them is apt to lose his position of influence over the athlete.

17. A coach should always keep his over all won-lost record in mind in order to see if his athletes view him as successful or not.

18. Coaches and Athletic administrators should continually be aware of those who are attempting to undermine the system of athletics whether they are athletes or not.

19. Those individual athletes who attempt to disrupt the athletic system must be punished or "put down" by any acceptable method if available.

20. A coach should refrain from taking extreme positions in any aspect of social or professional behavior because he must set a conservative example to his players and to other coaches.

21. A coach should organize himself to the point that there can be absolutely no question in his mind or his athletes' minds about what is occurring whether it be during a game, during practice, or during a road trip.

22. Athletes recognize the position of authority of the coach and respond to forceful and direct criticism or threat of criticism in a desired direction.

23. Discipline in athletics helps create model citizens or at the least helps develop individuals to take meaningful and worthwhile positions in society.

24. If more people would participate in athletics, they would be better able to discipline themselves in everyday life because of discipline they receive in sport.

25. Players should not be encouraged to come and talk to the coach about problems in the offense or defense because this is the coaches concern. The athlete should be concerned with perfecting his techniques within the system.